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09/816,324	03/26/2001	Tomoaki Ikeda	1190-0490P	8566

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EXAMINER
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JOHNSON, TIMOTHY M

ART UNIT	PAPER NUMBER
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2625

DATE MAILED: 01/30/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/816,324

Applicant(s)

IKEDA ET AL.

Examiner

Timothy M Johnson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 March 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3. 6) ☐ Other: \_\_\_\_.

### **Claim for Priority**

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119 (a)-(d), which papers have been placed of record in the file.

### **Drawings**

2. The drawings are objected to because the output of Encoded Region Designator block 45 in Fig. 9 should be connected as an input to the Region Selector block 2n instead of DCT block 2b. Correction is required.

A proposed drawing correction or corrected drawings are required in reply to this Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

3. Figures 12-13 should be designated by a legend such as --Prior Art-- as only that which is old is illustrated. (See MPEP § 608.02(g)).

### **Disclosure**

4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The Examiner suggests the following title:

Image Compression of only selected regions based on transmission bitrate, motion, and/or user input, and bit selection before compression based on transmission bitrate.

**Claim Rejections - 35 USC § 112**

5. The following is a quotation of the second paragraph of 35 U.S.C 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

For claim 3, line 3, "the outside" lacks antecedent basis. The claim indicates receiving input from the outside. From the outside of what is input received?

**Claim Rejections - 35 USC § 102**

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claim 4 is rejected under 35 U.S.C. § 102(b) as being anticipated by Normile, 6,028,965.

For claim 4, an image encoding device comprising an image signal input circuit receiving an image signal and dividing the image signal into macroblocks to generate block-divided image signals is provided by Normile in at least c. 3, lines 18-60. An image encoding circuit encoding the block-divided image signals output from the image signal input circuit, and outputting encoded image signals to a transmission path is

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provided by Normile in at least the second full paragraph in c. 4, the paragraph bridging cols. 3-4, the paragraph bridging cols. 4-5, and the second full paragraph in c. 7. A selector limiting the number of bits of the image signal to be encoded by the image encoding circuit according to a bit rate of the transmission path is provided by Normile in at least c. 2, lines 5-51, the second full paragraph in c. 4, the last full paragraph in c. 4, the second full paragraph in c. 5, the paragraph bridging cols. 5-6, the fourth full paragraph in c. 6, the last full paragraph in c. 6, the first full paragraph in c. 7, the second full paragraph in c. 7, the paragraph bridging cols. 7-8, and the first two full paragraphs in c. 8, with numerous explicit recitations for reducing the amount of bits or bitrate, which is selected in numerous ways where cited above by Normile.

### **Claim Rejections - 35 USC § 103**

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Normile, 6,028,965, in view of Okada, 5,729,295.

For claim 1, an image encoding device comprising an image signal input circuit receiving an image signal and dividing the image signal into macroblocks to generate block-divided image signals is provided by Normile in at least c. 3, lines 18-60. An

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image encoding circuit encoding the block-divided image signals output from the image signal input circuit, and outputting encoded image signals to a transmission path is provided by Normile in at least the second full paragraph in c. 4, the paragraph bridging cols. 3-4, the paragraph bridging cols. 4-5, and the second full paragraph in c. 7. An encoded region designator designating regions to be encoded by the image encoding circuit in accordance with a bitrate of the transmission path, wherein the image encoding circuit encodes only those regions designated by the encoded region designator may be provided by Normile in a broad sense, since Normile provides for causing certain portions of the image to be coded or not coded or coded differently based on the transmission bitrate in at least c. 2, lines 5-51, the second full paragraph in c. 4, the last full paragraph in c. 4, the second full paragraph in c. 5, the paragraph bridging cols. 5-6, the fourth full paragraph in c. 6, the last full paragraph in c. 6, the first full paragraph in c. 7, the second full paragraph in c. 7, the paragraph bridging cols. 7-8, and the first two full paragraphs in c. 8, so that region designation can be considered to be provided. It would've been obvious to one having ordinary skill in the art at the time the invention was made to consider regions being designated by Normile, since Normile provides for selectively reducing part of the image, filtering some parts of the image, truncating some parts of the transformed image, and sets some motion vectors to zero, where motion vectors correspond to specific regional blocks of the image. In any case, for further evidence of the conventionality of region selection, Okada explicitly provides for region selection of an area for enhanced quality compression of some selected regions of the image in at least c. 14, line 20 – c. 15, line 1. It would've been obvious to

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one having ordinary skill in the art at the time the invention was made to use region selection with Normile as taught by Okada, since Okada provides for at least the advantages of preventing noise and increasing allocation of codes to a specified area and motion area in c. 14, lines 20-28.

For claim 2, the image encoding circuit as set forth in claim 1, wherein said encoded region designator receives the bit rate of the transmission path is provided by Normile where cited above, and further by Okada in at least c. 14, lines 29-42, and a motion vector detected by said image encoding circuit is suggested by Normile where the motion vectors belong to specific block regions, and more so by Okada in at least c. 14, line 20 – c. 15, line 1, and designates the encoded regions based on them is provided by Normile and Okada where just cited.

11. Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Normile, 6,028,965, in view of in view of Dunn et al., 6,356,664.

For claim 1, an image encoding device comprising an image signal input circuit receiving an image signal and dividing the image signal into macroblocks to generate block-divided image signals is provided by Normile in at least c. 3, lines 18-60. An image encoding circuit encoding the block-divided image signals output from the image signal input circuit, and outputting encoded image signals to a transmission path is provided by Normile in at least the second full paragraph in c. 4, the paragraph bridging cols. 3-4, the paragraph bridging cols. 4-5, and the second full paragraph in c. 7. An

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encoded region designator designating regions to be encoded by the image encoding circuit in accordance with a bitrate of the transmission path, wherein the image encoding circuit encodes only those regions designated by the encoded region designator may be provided by Normile in a broad sense, since Normile provides for causing certain portions of the image to be coded or not coded or coded differently based on the transmission bitrate in at least c. 2, lines 5-51, the second full paragraph in c. 4, the last full paragraph in c. 4, the second full paragraph in c. 5, the paragraph bridging cols. 5-6, the fourth full paragraph in c. 6, the last full paragraph in c. 6, the first full paragraph in c. 7, the second full paragraph in c. 7, the paragraph bridging cols. 7-8, and the first two full paragraphs in c. 8, so that region designation can be considered to be provided. It would've been obvious to one having ordinary skill in the art at the time the invention was made to consider regions being designated by Normile, since Normile provides for selectively reducing part of the image, filtering some parts of the image, truncating some parts of the transformed image, and sets some motion vectors to zero, where motion vectors correspond to specific regional blocks of the image. In any case, for further evidence of the conventionality of region selection, Dunn provides for region selection of an area for enhanced quality by differently compressing in accordance with the selection. It would've been obvious to one having ordinary skill in the art at the time the invention was made to use region selection with Normile as taught by Dunn, since Dunn provides for at least the advantages of both efficiency in that most of the bandwidth is assigned to the important areas of the video, and thus simultaneously providing for a substantial increase in compression.



For claim 3, the image encoding circuit as set forth in claim 1, wherein said encoded region designator receives the bit rate of the transmission path is provided by Normile where cited above, and in conjunction with region designation of Dunn, and region information input from the outside is provided by Dunn in at least the first full paragraph in c. 7, and designates the encoded regions based on them is provided by Normile and Dunn where just cited. It would've been obvious to one having ordinary skill in the art at the time the invention was made to base region information input from the outside, since this provides for user interaction and the ability to select the desired quality of video objects with the image.

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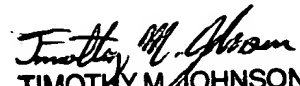
**Contact Information**

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy M. Johnson whose telephone number is (703) 306-3096, or the Supervisory Patent Examiner, Bhavesh M. Mehta, whose telephone number is (703) 308-5246.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone numbers are (703) 305-4700, (703) 305-4750, (703) 305-9600, or (703) 305-3800, or Customer Service at (703) 306-0377.

The Group Art Unit FAX number is 703-872-9306.

Timothy M. Johnson  
Patent Examiner  
Art Unit 2625  
January 27, 2004

  
TIMOTHY M. JOHNSON  
PRIMARY EXAMINER